

Introduction

Accelerator Frontier 6: Advanced Accelerator Concepts

AF6 Conveners



Cameron Geddes
Lawrence Berkeley
National Lab
cgrgeddes@lbl.gov



Mark Hogan
SLAC National
Accelerator Lab
hogan@slac.stanford.edu



Pietro Musumeci
University of California,
Los Angeles
musumeci@physics.ucla.edu

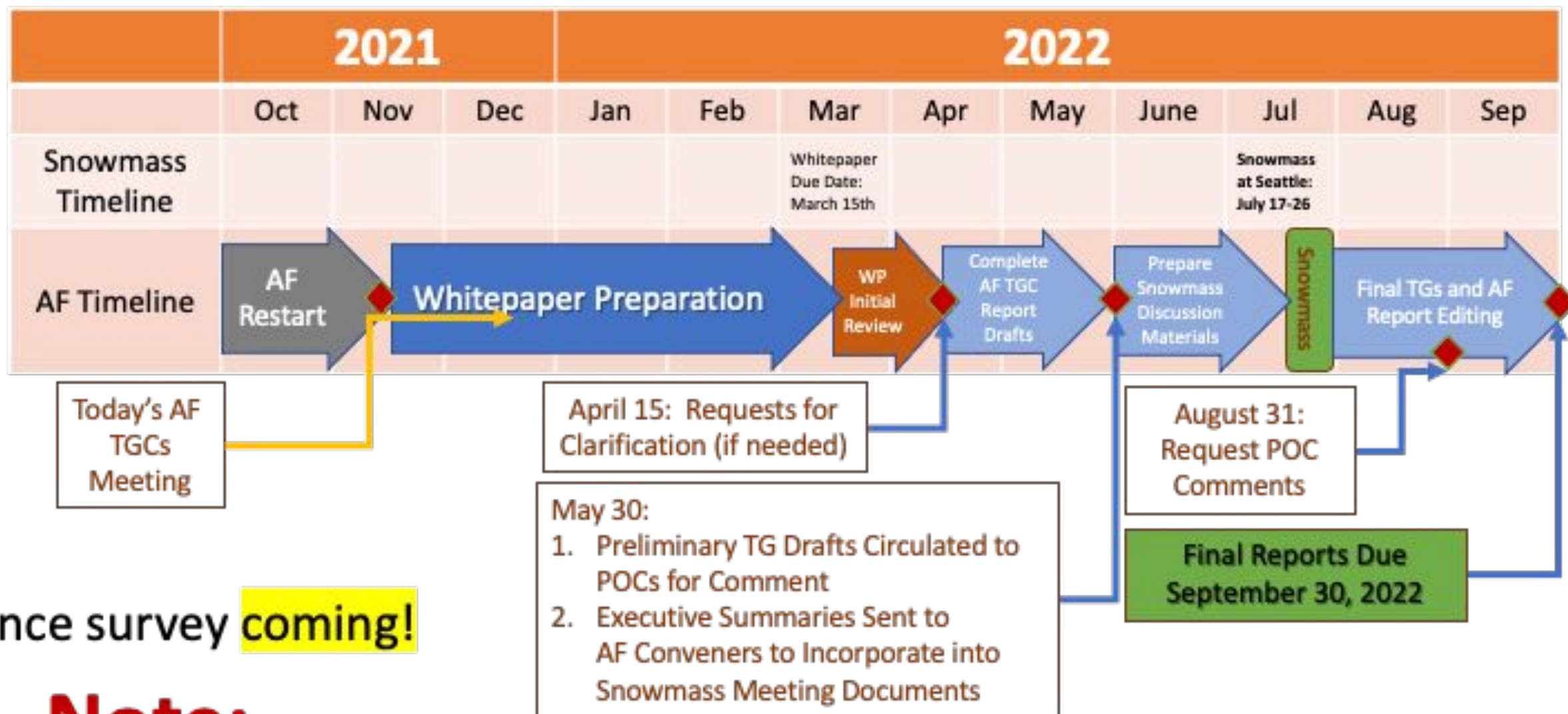


Ralph Assmann
Deutsches Elektronen-
Synchrotron
ralph.assmann@desy.de

AF6 Contributed Paper Update Meeting
February 15, 2022



Snowmass AF Timeline



Attendance survey coming!

Note:

Community Summer Study (CSS)

July 17 – 26, 2022 @ UW – Seattle

CSS Program Committee:



Survey Regarding Snowmass Attendance

Hello all,

I hope this finds you well. The Seattle Snowmass Summer Study workshop is scheduled to take place, in person, in Seattle between July 17 and 26 (<http://seattlesnowmass2021.net/>). We are coming up on the point where we have to make a decision on making it virtual or hybrid. To help us make this decision we'd like to assess the community's comfort with a large in-person meeting. Please take a few minutes (should be less than 10) to take the following anonymous survey:

<https://forms.gle/rEAv1Phx5RfQSSQc7>

We'd love everyone to take the survey, even if you are not planning on attending under any circumstances. And please feel free to distribute this far and wide. We know everyone is busy, but we'd very much appreciate your input!

We are requesting some information about services and accommodations that people may want. If you know someone in the community that might desire an accommodation, please feel free to forward the survey to them so we can get precise input on what will be needed at the meeting.

We also request demographic information to help us establish a baseline for the Snowmass community to compare to physics in general and also assess how well we are doing in keeping the meetings and participation diverse.

The survey will close on Feb 9th, midnight Seattle time.

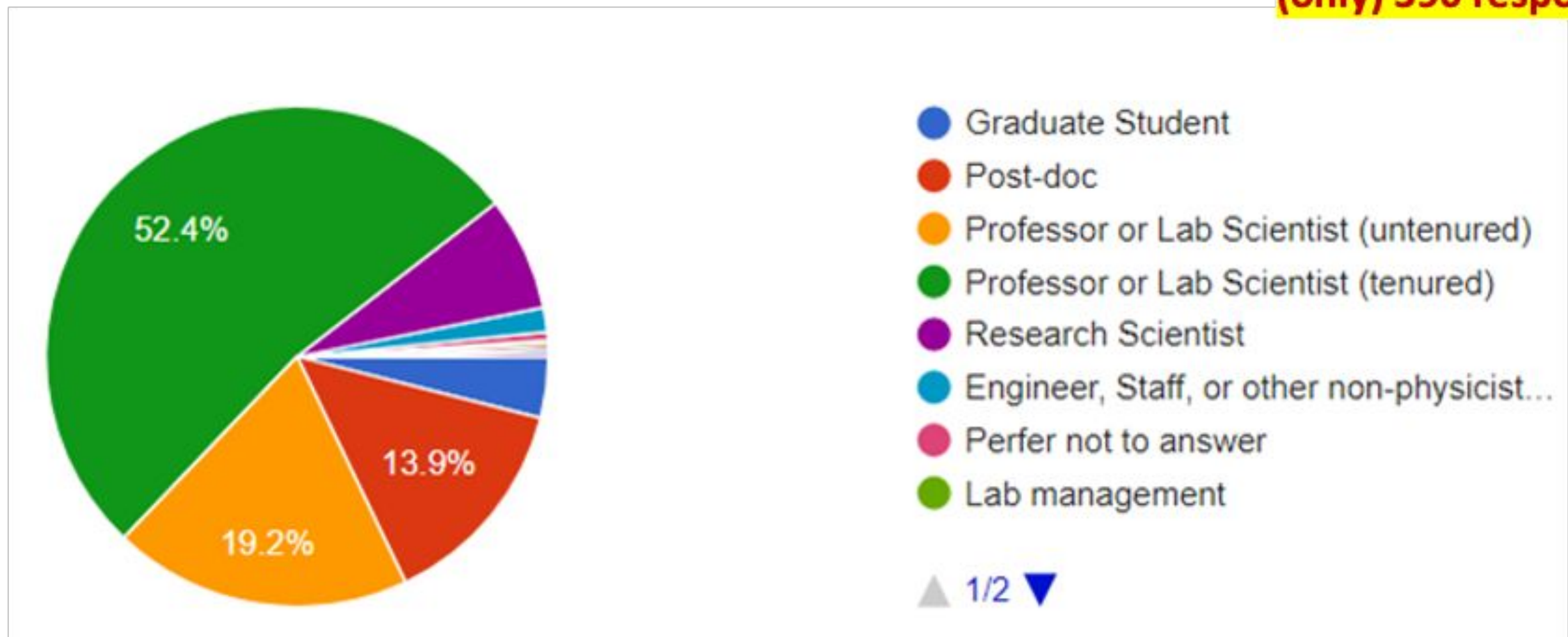
Cheers,

Gordon Watts & Shih-Chieh Hsu (co-chairs of the Seattle Snowmass Summer Study workshop).

P.S. Note - you will have to log in to google to answer the survey, but we do not record your email or contact information in the results (we checked this).

Attendance Survey (not complete) results

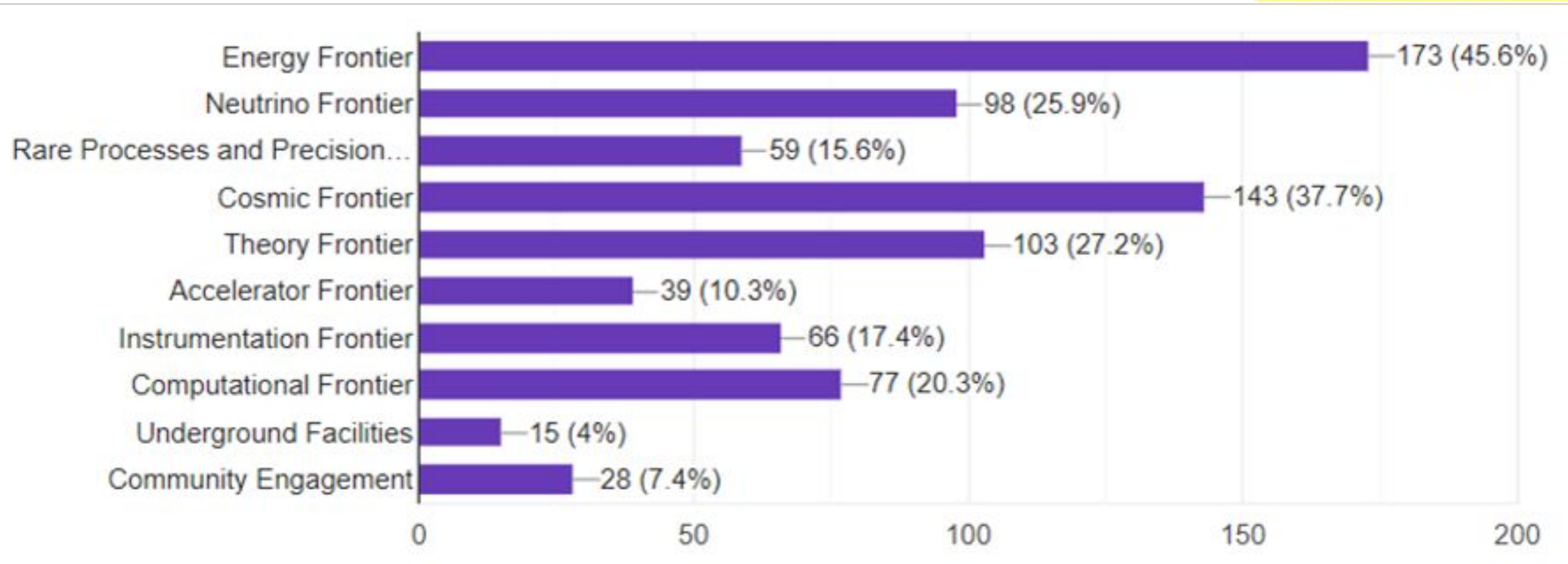
(only) 390 responses



- The biggest problem we currently have - not enough of the younger members of our community have responded

Attendance Survey (not complete) results

(only) 390 responses



- Just 40 of us coming/interested??? → waiting for final results...

Recent AF6 Updates

- *Contributed papers (more later)*
- *AF6 community meetings*
 - **Half-day Meeting Feb. 15:**
 - Review white paper content, finalize contributions, start organizing AF6 report
 - Zoom link: <https://lbnl.zoom.us/j/93103184391>
 - Indico time table of presentations: <https://indico.fnal.gov/event/52963/>
- *AF engagement*
 - Coordinating PASAIG White Paper submission to AF4 – not clear there is a designated lead for this. To be discussed at final slot on the agenda
 - Coordinating joint AF3-AF6-AF7 workshop on Polarized Positron Sources
 - March 1, 2022 05:00-08:00 Pacific Time
 - <http://indico/fnal.gov/event/52959>
- *EF engagement*
 - November 2021 Monthly Snowmass Newsletter stated ‘The Accelerator Frontier has also endorsed another EF and IF initiative – the e+e- collider forum’. AF/EF are negotiating leads for this forum that will produce another contributed paper for the Snowmass proceedings that will appear in ‘Cross Frontier Groups’ section. We will distribute details when available.
- *Snowmass Agora*
 - Advanced accelerator colliders Agora on April 13th. Details to be negotiated within the next few weeks.. Another opportunity opportunity to engage EF/TF. Although after March 15th, can still influence summary Contributed Papers that come later (AF6, AF, EF...) – see 2nd Agora on circular e-e+ colliders: <https://indico.fnal.gov/event/52534/>

European Strategy for Particle Physics – Accelerator R&D Roadmap

- Email from Ralph Assmann, Edda Geschwendtner, Rasmus Ischebeck
January 21, 2022
- CERN Council discussed the accelerator R&D report at its December meeting
- It is now publicly available at:
 - <http://arxiv.org/abs/2201.07895>
 - Next step: will be published as CERN Yellow Report
 - Forwarded to AF6 mailing list to take into account in White Papers
- Follow up discussions on implementation in progress by LDG in Europe
- This report is 260 pages long. Accelerator Capabilities (section 6) of CSS2013 Report is 22 pages:
<https://lss.fnal.gov/archive/2013/conf/fermilab-conf-13-648.pdf>

Contributed Papers

- Following LOI submissions and subsequent meetings, Interest Groups have formed to consolidate themes into more impactful contributed papers
- Details (title, description, point of contact) in AF6 area of Snowmass2021 website and in the agenda for today's workshop
- Today each interest group has been invited to share an update on the status and plans for each contributed paper
- Contributed paper template / format was distributed
 - 1-2 page Executive Summary up-front (helpful for overall AF6 summary)
- Generally aiming at first draft by end of January, review in February (today) and submission by March 15th deadline
- Please provide a link to a non-editable draft of your Contributed Paper that members of the community can access to provide feedback before submission
- Today we will review progress on the papers, collect and answer your questions

AF6 contributed paper update meeting

Tuesday Feb 15, 2022, 9:00 AM → 1:00 PM US/Pacific

Cameron Geddes (LBNL), Mark Hogan (SLAC), Pietro Musumeci (UCLA), Ralph Assmann (DESY)

9:00 AM	→ 9:15 AM	Introduction from conveners	🕒 15m
9:15 AM	→ 9:27 AM	Laser-driven structures Speaker: Joel England (SLAC)	🕒 12m
9:27 AM	→ 9:39 AM	Nanomaterials based Nano-plasmonic accelerators Speaker: Aakash Sahai (University of Colorado)	🕒 12m
9:39 AM	→ 9:51 AM	PASAIG-LWFA Speaker: Carl Schroeder (Lawrence Berkeley National Laboratory)	🕒 12m
9:51 AM	→ 10:03 AM	PASAIG-PWFA Speaker: Spencer Gessner (SLAC)	🕒 12m
10:03 AM	→ 10:15 AM	PASAIG-SWFA Speaker: Chunguang Jing (Euclid Techlabs)	🕒 12m
10:15 AM	→ 10:27 AM	PASAIG-AWAKE Speaker: Dr Patric Muggli (Max-Planck-Institut für Physik)	🕒 12m
10:30 AM	→ 10:45 AM	Coffee Break	🕒 15m
10:45 AM	→ 10:57 AM	Advanced Accelerator Facilities Speaker: John Power (Argonne National Lab)	🕒 12m
10:57 AM	→ 11:09 AM	Laser drivers Speaker: Leily Kiani (LLNL)	🕒 12m
11:09 AM	→ 11:21 AM	Beam Delivery Systems Speaker: Spencer Gessner (SLAC)	🕒 12m
11:21 AM	→ 11:33 AM	Electron Sources Speaker: Dr Matthias Fuchs (University of Nebraska Lincoln)	🕒 12m
11:33 AM	→ 11:45 AM	Polarized Positron Sources Speaker: Pietro Musumeci (UCLA)	🕒 12m
11:45 AM	→ 11:57 AM	Near Term Applications Speakers: Claudio Emma (SLAC), Jeroen van Tilborg (LBNL)	🕒 12m
11:57 AM	→ 12:09 PM	PASAIG - Physics case Speaker: Stepan Bulanov (LBNL)	🕒 12m
12:09 PM	→ 12:21 PM	PASAIG - AF4	🕒 12m